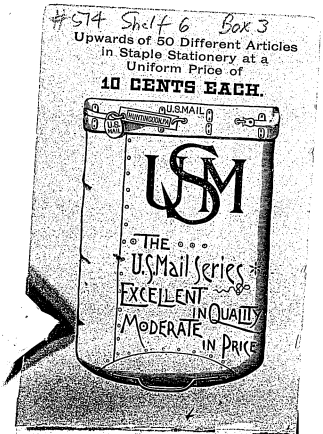
Notebook, PN-Undated.11

This pocket notebook was used by Edison in the late 1880s or early 1890s for notes regarding experiments on batteries, a sound bridge, chemicals, lamp filaments, and ores. There are also entries relating to the development of a theory of the sense of smell. The front cover is stamped "A Pad for a Penny." The pages are unnumbered. Approximately 40 pages have been used.

#574 Shelf 6 Box 3



For battery solutions for dissolving litharge from gladstones peroxid plates, Zinc or Pb reduced by H or otherwise. –

Sulphuric
Hypophosphorous
Metaphosphoric
glacial phosphoric
Nitric
Dithionic, $H_2S_2O_6$
Mixture Sulphuric & acetic
acetic.
Formic.
" & Sulphuric
Pyrophosphoric
Arsenic acid

11 6 Box 3

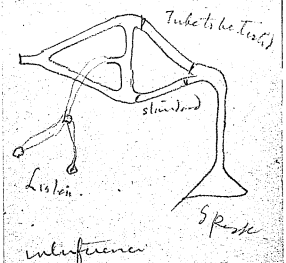
Tartaric & Sulphuric
Succinic " "
Boric.

Hot Caustic Soda
Lewis. This should
dissolve Lithange.

as detitant for
~~Antimony~~ pentchl
Use Tetra-chl
Methane (CCl_4)
perhaps antimony wont
separate

Box 3

Sound Bridge



influence

Idea from text book

Only small on inhaling
its a vibratory or momentary
thing - holding breath
in atmosphere of strong
odor no smell perceived
but 1st inrush of breath
gives smell — Ferrier
by experiment of
Revolving ~~[illegible]~~ Chamber
connecting a number of
vapors bottles pressure
& revolving bringing
1st one & then another
to a common tube
from which odor
vapor ejected smell
thus gives compound
odors may be nauseous

all Hodgson's 1760 [illegible]

Startling results on the Theory of smell.

See if can find a Solvent for some of the Chlorinated or Halogen derivates of Cellulose – to get a cheap Cellulose preserve structure

May have to dehydrate Cellulose Considerable –

Acetyl Chloride
Very Valuable agent
when brought together
with an alcohol as
for Ex Methyl alcohol
HCl is formed & the
Acetyl Radical or
prompt takes place
of the H of the alcoholic
OH or Hydroxyl —
product Methyl acetate

Ferricyanide of Na or K in alkaline Sols is an excellent Oxidizing agent. Bailey

Fats richest in Stearin are Mutton Tallow beef tallow & Lard — Palm oil Rich in Palmitin Sperm & Cod Liver oil Rich in Olein

all Halogens dest. of

Hydrodic acid
Converts Oleic
a into Stearic

$C_{18}H_{34}O_2 + H_2$
Oleic
$= C_{18}H_{36}O_2$
Stearic

Lead oxide combines with
Phenol — for phenol
Cylinder —

all Hydrogen does it

Benzoates of the metals may do for phonocylinders

Benzoate Lead - Eh

Artificial Camphor a salid made by passing HCl thro Turpentine, might do for phono Cylinder

Iodo ... all Halogens do it

Good! —
Use Regular
Japan & then
dip in Kerosene
Solution of
Chl of Sulphur
also try part
Chl anthony
flowing over
this will dry it
instantly! —

~~H replaced OH~~ a
Hydroxyl removed is
~~HCl~~ chloride phos
Cl to be put in place
of OH + phosphorous acid
formed
One H atom of a prime
Hydrocarbon is combinable
with O to form an OH
which atom makes it
an alcohol
Methyl alcohol CH_4O
or CH_3OH, HCl - HBr HNO_3
H_2SO_4 all eliminate the Hydroxyl
OH.

50 years ago all Halogens does it for

When Methyl & other Alcohols are oxdzd they r converted into Aldehydes, these oxdzd to acids

(1e) Hydr. alcohol Aldehy Formic acid

CH_4-CH_4O CH_2O CH_2O_2

Acetyl Chloride - Valuable reagent much used - Examination of Carbon Compounds. Its value depends on its action towards alcohols when brot together as for Example Methylic alcohol HCl evolved & the acetyl group takes place of the H of the Hydroxyl OH

Thus

$CH_3\,\underline{OH} + C_2H_3OCl$

$\cancel{HHCl} = CH_3\,O.C_2H_3O.$

$+HCl$ – product an

Ethereal salt,

Methyl acetate.

Hence if on heating an

Alcohol with Acetyl Chloride

it changed. we know

there is an OH there.

Bromide & Iodide resemble

it closely

Get Remsens Organic Chemistry. –

Tetra-Chlor-Methane is made by treating Bisulphide Carbon with Chlorine or by treating Chloroform by Iodine Chloride – This will pbly dissolve & thus dilute the perchloride of Antimony Try it –

Crude Rubber is composed of two parts one tough + elastic other, ductile + perfectly adhering to surfaces; latex is solvent in Reg Rubber Solvents other not, - See Miller Organic 244 - phono Cylinders or wipers

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Chl Sulphur dissolves in Bisulphide Carbon.
1 pt ChlS 60 pts BiSul
This might do for filis of asphalt perhaps stronger ChlS - The BiS sulfur & this allow formulas Miller Organic 245

do not use Hydrocarbon as all Halogens does not

Leucine & Glycine
both have the property
of preventing the
precipitation of Cupric
hydrate, in Alkaline
Solutions.
Strong NaO with
Leucine or glycine
in Solution, gives
no precipitate when
Cupric Sulphate
added – Hence a Daniel
Cell can be made thus
+ Pot Cyn. Res – Iron

Wallace Orgn

All Halogens does not

HCl dissolves
peroxide Lead
forming Rose Colored
Solution.
but if acid Concentd
and the reaction
takes in Nitric
then form a deposit

Using artificially prepd
platys peroxide
Lead - in Nitric
acid in porous
cell any reduction
of PbO_2 by the H
is immy made
good by the nitric
acid - !!

Try acetate of
Ammonia for a
Seal with Zinc + PbO_2
plates

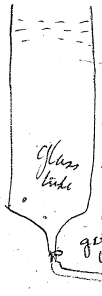
Probly the best solution
for PbO_2 plates is
finely divided Lead
plates for Pos Element
PbO_2 to neg + a
Hot solution of
Lewis Soda which
dissolves the PbO
formed
po

a new hydrogen locator

good –
any substance
containing Cellulose
can have all sizing
& incrusting matter
dissolved out by
Bromine – See
Cellulose 646 Miller

paper immersed in
Acetic Anhydride
at 356° Fahr is
changed to an
Acetate of Cellulose
This will probably
make the paper
transparent, then
regenerate the Cellulose
by an alkali

There is a penta
sulphide of ammonia
which is easily
made – Miller's
Inorganic 484
This might act on
Humus compounds
or used to reduce
Chlorinated Hydrocarbons
or substitute Sulph.
etc –



Try getting out $Hg(NO_3)$ + HNO_3 solution from ore by displacement with water – get a reagent to test. perhaps Colored water do.

In concentrating
Sulphuric acid
How would it do
to use Nickel
or Even iron
Stills with a
platinum strip in
it & gron connected
to High Volt Neg
side to prevent
oxidation, or

final Concentration
with Dynamo
decomposing water

Pentbromide of Antimony
will perhaps be better
than Pent chl for fils.
as its action is not
so violent —

on ore
Try 20 pct sol H_2SO_4
to dissolve off coating
on gold –

Pass chlorine water
through ore, then.
wash out & put Hg
in –

Pass hot chloride
Zinc through ore
then Wash out &
add Hg –

pass hot chromic a through ore wash out + add Hg -

ditto with some H_2SO_4 - hot,

Bisulphide Carbon wash + add Hg.

Chloride Lime hot, wash + Hg -

Chl Lime solution then add wash H_2SO_4

Cyanide K. hot,
Wash + add Hg –
also – a mercuric salt
discarded – CyK –
CyK destroys opal + silver of an hour

Hypochlorous acid
Solution, Cheap –
powerful oxdzr wash +
add Hg –

Hot Lewis dye wash
+ add Hg

Have Kennelly
Try effect of transformer
Currents [illegible]
Carbon – also lead
Iron – antimony
on solutions of
Bi Sulph C –
Benzol – Kerosene
Etc =

Perchloric acid is the most powerful oxidizer known

Weaker Solutions can be obtained by adding on perchlorate of Soda KO by H_2SO_4

How would it do to make glass of fused Boric acid & Shellac with bleached shellac or a resin organic

like Dammar.
perhaps cheap
Lenses could be
made thus.
· Statues works of
arts — Boric acid fuse
with oxide lead all proportions —

Take up that subject
of making elastic
filaments by boiling
in Linseed — perhaps
Oleic or other oils wh
better. also Melted Sulphur
there is a substitute where I
think

Ore -
Hot Stannous
Chloride -

Potassic Stannate,
hot probably tin the
gold over -

Trichloride of antimony
powerful action on animal
matter, slightly sol H_2O
perhaps enough for ore
also soluble in HCl.

Oz

Corrosive sublimate
Sal 16 pts Water.
It acts powerfully on animal
matter

Nitrate Silver —
perhaps an infinitesimal
quantity will answer
to Coat gold with
Silver

Ore

It may be that the surface of gold in Sulphurets is coated with yellow cupric sulphide Cu_2S_3 —

Ore

Mercuric Cyanide Sol & pts water

Gill & Mousel say
Chem Soc Jnl 1868)
466) Paraffine melting
at 140 fahr boiled
with mixture of Bichrom
Pot & Sul acid is gradly
oxidized a number of acids
of acetic series formed
among which is Cerotic
acid

Look up Melacinnamons
Muller 342 for defuses
phosphorescence etc

Big Schemes

Making Ethylic alcohol artificially in

~~Ethylene~~ Acetylene is formed by direct union H with C (Carbon manufacture in 1/100 with H) Eh

Ethylene can be made from acetylene absorbed by Sul acid to ethyl sulphate then distilled with H_2O Ethyl alcohol formed

Kennell

Investigate H marks of dif metals when used as pens in Chem Telegr Strip. See what metals do or do not time intervals Res at speeds = paper for Sullivan & Illingsworth.

Investigate the white Compound which always forms when Chlorine is in Lamp & fil heated also when Chl Carbon is used, + Chloroform may be a new Hydrocarbon. Also Anderson does it may be Hexachlorbenzene

Try chloroform for diluting pent chl Sb for filling

See Brodie on Wax
Philo Trans 1848
147 1849. 91.

Heat in Vacuo. Cast iron on Hydrocarbon to form Acetylene & Metacetylene &c

5

for phenic cylinder
Halogen derivatives
of acids of the
Oxalic series
Miller. 964.